

INDY  
HAM RADIO  
NEWSLETTER

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INDIANAPOLIS RADIO CLUB INC.

ISSUE No. 8

PROGRAM MEETING:

FRIDAY April 27<sup>th</sup> Gene Van Sickle W9KJF will show us and tell us about "DX PLACES" he has visited. This is Ladies night so bring out the XYL and let them see what the old man does on each second and fourth friday evening of the month.

FIELD DAY  
& SPECIAL  
DEMONSTRATION.

Jim Sugioka has appointed the following to serve on the Field Day and Special Events committee: Doug & Deane Loughmiller Cary Carender and Gary Hughes. They will make recommendations to the club for participation in the coming ARRL Field Day events in June as well as a Special Events program scheduled for June 8<sup>th</sup> and 9<sup>th</sup> at the Eastgate Mall sponsored by the Handicapped and Disabled in the area. This group requested that the IRC provide amateur communications at the Mall.

QSO & PHOTO

The Club received about 5 QSL cards and Op. photo at the last meeting. We are planning to have a display at the August Hamfest of all members of IRC. QSL cards as well as photo of the Chf. Op. Admission to this Select Rogue's gallery is one QSL and one Portrait signed on the front. Bring your set to the next QSO.

CALL BOOK  
DIRECTORY

Work is greatly accelerated in winding up the copy for the forthcoming Marion County Call Book. Sufficient ads have been sold to defray costs of publication. Area Clubs, Nets, Reference material such as a frequency chart, FM repeaters covering the State are also being included in this issue, our 5<sup>th</sup>. Alvey W9EL advises that he is handing everything over to the printers April 18<sup>th</sup>, 1973 with availability of the Call book within two - three weeks. (Art Schultz, W9BR Committee Chairman for Call Book.)

EDITORS WORK  
APPLAUDED

The Club showed its thanks and appreciation for the splendid job being done by our Editor, Bob Osterhous, W9PSE, getting out punctually the IRC Newsletter by applauding loud and long at our last meeting. The Club's recent resurgence and revitalization is due in large measure to your unstinting efforts and dedication to Ham Radio.

(above items reported by Art Schultz W9BR.....Thanks Art.)

MEETING  
PLACE

IRC meets the second and fourth Fridays each month at 8:00 PM in the United Christian Mission Bldg. 222 S. Downey Ave. (5800 E. Wash.) Visitors Welcome! Refreshments served after meeting.

PROGRAM REVIEW: of Robert Annis on Magnetics is on the reverse side and ably reported by Art. Schultz who has written thank you letters to all our speakers this year and done all the necessary arranging. This has been a lot of work and has resulted in our fine attendance and interest in the Club's activities.

HAMFESTS

DAYTON HAMVESTION.....April 28<sup>th</sup> Saturday at the Dayton, Ohio Hara Arena and Exhibition Center. Dinner Friday night with KyUGA Barry Goldwater QCWA president presiding.

de....Bob W9PSE



APRIL 13 PROGRAM REVIEW OF ROBERT ANNIS

SUBJECT: MAGNETISM ---Prepared by: Arthur J. Schultz, W9BR

Magnetism is an all pervading media in space, and it is difficult to find anyplace where one can escape it. Every time an amateur operator throws his carrier on the air he floods space with more of this interesting material.

Magnetism was known from very early times. Documents written about the year 1100 BC describe a floating needle compass. China carved out an empire of millions of square miles using a lodestone, a naturally occurring magnet, in a compass pulled overland on a wagon. Faraday in 1831, showed that an EMF was generated by a changing magnetic flux with time. Knowledge of this expanded more rapidly. In 1873, a mere 100 years ago, Gramme gave us the first DC Electric motor. Hertz in 1886 demonstrated radio waves predicted by Maxwell. DeForest gave us the three electrode vacuum tube in 1907 as a result of Edison's lamp and his well-known Edison Effect.

Our own D. J. Angus in 1915 invented a Chrome Cobalt high quality magnetic steel widely used in WWI. The earth is a giant permanent magnet whose fields constantly drift around and are plotted frequently to give data to ship and air navigation.

Bob made clear a very confusing point, ie, the difference between magnetic Deviation and Declination. Magnetic Deviation is an alteration of the magnetic field at a point in space caused by the presence of some local object such as the metal hull of a ship; thus throwing the compass off and correction must be applied. Magnetic Declination is the angle that a freely turning magnetic needle makes with the imaginary line pointing to true north. The earth's magnetic field is not a nicely behaved system where all lines align themselves with the coordinate system. Eddy Currents are those induced in a conductor located in a varying magnetic field and flowing as though in a short circuited turn, wasting power and heating up. Hysteresis losses are due to the work done by the varying magnetic field rotating the magnetic domains in the material again wasting power and heating.

Bob demonstrated the Barkhausen effect which is a process of the generation of a wide spectrum of random currents due to the-rotation of magnetic domains in a metal during magnetization and demagnetization. This principle is used in the Barkhausen-Kurz Oscillator or the Magnetron used in high frequency radar systems. Magnetism has a complete analog of scientific values and terms related to those of the Electric system. For example, we know that Ohms is equal to Volts divided by Amperes. In the resistance in magnetic systems, we call it Reluctance equals Gilberts divided by Maxwells. Thanks Bob for a paper loaded with powerful information which could easily be expanded into many future papers.